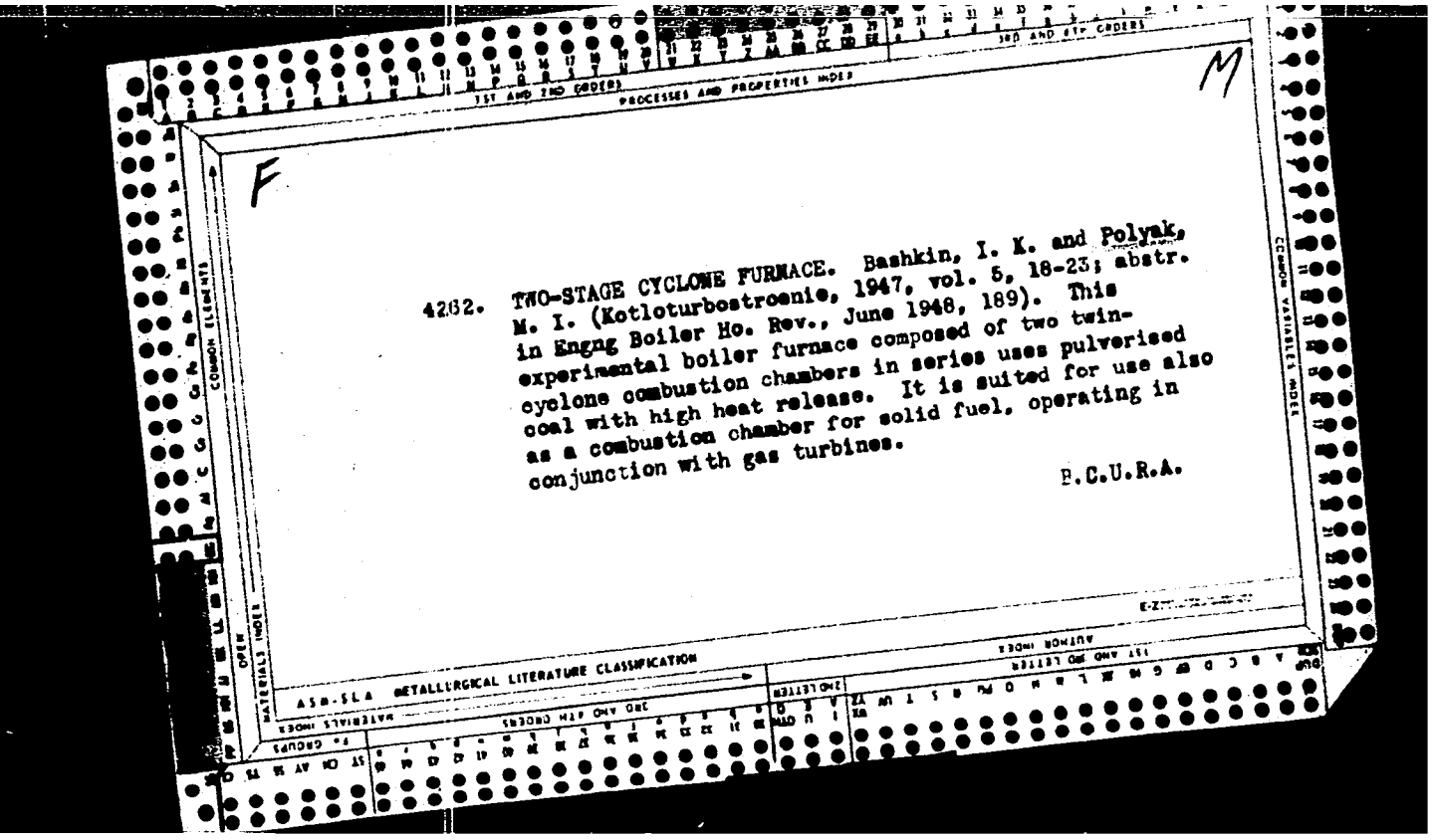
Potentiometric Method of Determining Aluminum in Heat-resistant Alloys on a Nickel Basis SOV/32-25-3-9/62

W(VI), Fe(III) (up to 0.25%), and Fe(II) do not disturb the determination of aluminum. Small amounts of Cr(II) inhibit the activity of the aluminum electrode. In the presence of Mo(VI) a specific adsorption of Mo takes place on the electrode surface while the tri-, tetra-, and pentavalent form of Mo has no disturbing influence. The components of the heat-resistant alloys Ni, Cr(III), Fe(II), Mo(III), W(VI), and Ti(III) do not disturb the potentiometric determination of aluminum with sodium fluoride in the two reactions mentioned above. Admixtures of Cu, As, Sn, and Sb which coat the aluminum electrode are removed by an addition of zinc to the acid solution of the alloy. The method described takes considerably less time than the gravimetric determinations and operates with maximum errors of $\pm$ 0.2%. The course of analysis for both titration varieties is given. There are 1 figure, 1 table, and 3 Soviet references.

Card 2/2

MUKHINA, Zinaida Stepanovna, kand.tekhn.nauk; NIKITINA, Yekaterina Ivanovna; BUDANOVA, Lidiya Mitrofanovna; VOLODARSKAYA, Raisa Samuilovna; POLYAK, Lyudmila Yakovlevna; TIKHONOVA, Anna Aleksandrovna; KUNYAVSKAYA, T.M., izdat.red.; ROZHIN, V.P., tekhn.red.

[Methods of metal and alloy analysis] Metody analiza metallov i splavov. Pod obshchei red. Z.S.Mukhinoi. Moskva, Gos.izd-vo obor.promyshl., 1959. 527 p. (MIRA 12:10)
(Metals--Analysis) (Metallurgical analysis)



F

M

4262. TWO-STAGE CYCLONE FURNACE. Bashkin, I. K. and Polyak, M. I. (Kotloturbostroenie, 1947, vol. 5, 18-23; abstr. in Engng Boiler Ho. Rev., June 1948, 189). This experimental boiler furnace composed of two twin-cyclone combustion chambers in series uses pulverised coal with high heat release. It is suited for use also as a combustion chamber for solid fuel, operating in conjunction with gas turbines.

B.C.U.R.A.

EPSHTEYN, V.G.; POLYAK, M.A.

Book reviews and bibliography. Kauch. i rez. 24 no.6:62 '65.
(MIRA 18:10)

POLYAK, M.A.; EPSHTEYN, V.G.; LISOGURSKIY, I.Z.; YUR'YEVA, A.K.; ZAKHARKIN, O.A.; KOLDAYEVA, T.N.; Prinimali uchastiye: SKOVORODKIN, P.A.; GAVSHINOV, I.I.; MINEYEV, A.N.; SUR'YANINOVA, M.N.; BORISOV, N.V.

Studying the process of rubber mixture preparation in 20 r.p.m. rubber mixers. Kauch.i rez. 22 no.4:5-10 Ap '63. (MIRA 16:6)

1. Yaroslavskiy shinnyy zavod i Yaroslavskiy tekhnologicheskiy institut.

(Rubber) (Rubber machinery)

ACC NR: AP7008174 SOURCE CODE: UR/0138/67/000/001/0013/0014

AUTHOR: Epshteyn, V. G.; Zakharkin, O. A.; Polyak, M. A.; Yukhnovich, S. G.

ORG: Yaroslavl Institute of Technology (Yaroslavskiy tekhnologicheskiy institut)

TITLE: Effect of additions of SKD-10 liquid polymer on the technological properties of compositions made with 100 percent of synthetic butadiene rubber

SOURCE: Kauchuk i rezina, no. 1, 1967, 13-14

TOPIC TAGS: synthetic rubber, butadiene rubber, polymer, vulcanized rubber, technical property/SKD 10 polymer

ABSTRACT: A method is proposed for improving the technological properties of compositions made with carboxylated butadiene rubber by introducing SKD-10 liquid polymer. The introduction of liquid polymer does not cause a deterioration of the physicomechanical characteristics of vulcanized rubber. Orig. art. has: 2 figures and 2 tables.

[NT]

SUB CODE: 11/SUBM DATE: 11Jul66/ORIG REF: 003/

Card 1/1 UDC: 678.762.2:678.062.004.12

S/0138/64/000/005/0053/0055

ACCESSION NR: AP4038909

AUTHORS: Vasil'yev, G. Ye.; Yemel'yanov, D. P.; Epshteyn, V. G.; Polyak, M. A.; Zakharkin, O. A.; Yartsev, V. A.; Golkin, V. B.

TITLE: Improving the quality of rubber compounds by means of carbon black master batches

SOURCE: Kauchuk i rezina, no. 5, 1964, 53-55

TOPIC TAGS: carbon black, SKS30ARKM rubber base, SKS30ARKM carbon black, gas furnace carbon black, furnace PM 70 carbon black, vulcanization index

ABSTRACT: This investigation involved three types of master batches: 1) a low-modular protector batch on SKS-30ARKM rubber base, containing (per 100 g rubber) 40 g channel carbon black and 20 g gas furnace carbon black; 2) a carcass batch on SKS-30ARK-15 and natural rubber base (in a 90:10 ratio), containing 40 g gas furnace carbon black; 3) a protector batch on SKS-30ARKM-15 rubber base, containing 50 g PM-70 carbon black. The batches were prepared in a laboratory mixer. Their discharge temperature was within the 160-175C range. They were rolled and stored for 24 hours before being incorporated into a base mix. The tests for the physico-mechanical properties of the vulcanizates of rubber compounds prepared with these carbon black-rubber mixtures proved their superiority to the controls of the same

Card 1/2

ACCESSION NR: AP4038909

composition but prepared under standard procedures. The laboratory data were checked at the Yaroslavl' Tire Plant under factory conditions. Orig. art. has: 2 tables.

ASSOCIATION: Yaroslavskiy tekhnologicheskiy institut (Yaroslavl' Technological Institute); Bakinskiy shinnyy zavod (Baku Tire Plant); Yaroslavskiy shinnyy zavod (Yaroslavl' Tire Plant)

SUBMITTED: 00	DATE ACQ: 05Jun64	ENCL: 00
SUB CODE: MT	NO REF SOV: 003	OTHER: 005

Card 2/2

VASIL'YEV, G.Ya.; YEMEL'YANOV, D.P.; EPSHTEYN, V.G.; POLYAK, N.A.; ZAKHARKIN, O.A.; ZARTSEV, V.A.; GOLIKIN, V.B.

Improving the quality of rubber compounds by using carbon black master batches. Kauch. i rez. 23 no.5:53-55 My '64. (MIRA 17:9)

1. Yaroslavskiy tekhnologicheskiy institut, Bakinskiy shinnyy zavod i Yaroslavskiy shinnyy zavod.

POLYAK, M.A.; TERMER, V.Yu.; NAZAROVA, M.V.

"Information bulletin on the foreign chemical industry." Kauch. i rez. 22 no.5:61 My '63. (MIRA 16:7)
(Tires, Rubber)

POLYAK, M.A. (Yaroslavl' Institute of Technology)

Cooperation of the Yaroslavl' Institute of Technology and the Yaroslavl' Tire Plant for modernizing the PC-2 (RS-2) rubber mixer and strenthening the production process of rubber mixes.

Report presented at the Third All-Union Conference on Automation and Mechanization of major rubber production processes, Dneprepetrovsk, 2-6-Oct 62

POLYAK, M.A.

Fourth scientific and technical conference on the chemistry and technology of caoutchouc rubber. Kauch.i rez. 21 no.12: 48-49 D '62. (MIRA 16:1)

(Rubber industry)

POLYAK, M.A.

"New types of rubber and fields of their practical utilization" by N.D. Zakharov. Reviewed by M.A. Poliak. Kauch.i rez. 21 no.11:64 N '62. (MIRA 15:12)

(Rubber)
(Zakharov, N.D.)

ZARHARIN, O.A., POLYAK, M.A., EPSHTEYN, V.G., LISOGURSKIY, I.Z.

The possibilities of intensifying the process of rubber mix preparation in the RS-2 rubber mixers.

Report submitted for the 4th Scientific Research conference on the Chemistry and technology of synthetic rubber. Yaroslavl, 1962

S/138/62/000/012/010/010
A051/A126

AUTHOR: Polyak, M. A.

TITLE: IV Scientific research conference on the chemistry and technology of synthetic and natural rubber

PERIODICAL: Kauchuk i rezina, no. 12, 1962, 48 - 49

TEXT: The conference, organized by the Yaroslavl' Regional Office of (VKhO) im. D. I. Mendeleyev, the ЦБТИ (TsBTI) Yaroslavl' Sovnarkhoz and the Yaroslavl' Institute of Technology, was convened for May 30 to June 1, 1962. Over 350 representatives of rubber manufacturing plants, of institutes for scientific research and learning took part. Fifty-three papers were presented. Some of the subjects were: the new PC (RS) tire with removable tread rings (P. A. Sharkevich - ЯШЗ (YaShZ)). The new tire construction is said to increase service life by 2 to 3 times. The 7.50-20 size RS tire is being mass produced at the Yaroslavl' Tire Plant; a new rubber recovery method using a heated air jet, (M. M. Makarov, V. G. Epshteyn, V. M. Makarov); the possibilities of intensifying the process of rubber mix preparation in the RS-2 rubber

Card 1/4

S/138/62/000/012/010/010
A051/A126

IV Scientific research conference on...

mixers (O. A. Zakharkin, M. A. Polyak, V. G. Epshteyn, I. Z. Lisogurskiy, etc.); the theoretical study of rubber tensility (G. A. Patrikeyev); also discussed by V. G. Epshteyn - Yaroslavl' Institute of Technology, N. I. Kirshensteyn, Yu. S. Zuyev, G. M. Bartenev - Scientific Research Institute of the Rubber Industry; the prevention of rubber-mix scorching by using "molecular sieves", (G. A. Blokh - Dnepropetrovsk Institute of Chemical Technology); perfecting the rubber mixture composition, based on butyl rubber, for diaphragms in formator-vulcanizers, (A. G. Shvartz, V. G. Frolikova, V. S. Tyurina - Scientific Research Institute of the Tire Industry, V. V. Aleksandrov, D. B. Boguslavskiy, etc. - Dnepropetrovsk Tire Plant); the study of stereo-regulated rubber, CKB (SKV) properties and their use in automobile tires (L. A. Ognevskiy - Yaroslavskiy Tire Plant); the same subject was discussed by A. M. Marey, N. P. Kuznetsov, G. Ye. Novikova, Ye. M. Sidorenko - All-Union Scientific Research Institute of Synthetic Rubber, im. S. V. Lebedev; rubber transformation with an aldehyde group in the rubber (K. P. Novina, Z. M. Rumyantseva, M. I. Farberova, V. G. Epshteyn - Yaroslavl' Institute of Technology); the study of properties and application of new rubber types - silicon rubber (M. M. Fomicheva - All-Union Scientific Research Institute of Synthetic Rubber, im. S. V. Lebedev), butyl

Card 2/4

S/138/62/000/012/010/010
A051/A126

IV Scientific research conference on...

rubber (L. M. Asherova - Yaroslavl' Plant for Commercial Rubber Articles), isoprene rubber (Z. D. Tyuremnova, etc. - Yaroslavl' Plant for Commercial Rubber Articles), chlorosulfinated polyethylene (L. G. Angert - Scientific Research Institute of the Rubber Industry); covulcanization of various polymers in the production of rubber and the non-uniformity of vulcanizates based on different rubber combinations, (S. V. Orekhov, D. A. Bogadkin, N. D. Zakharov - Yaroslavl' Institute of Technology, and Moscow Institute of Fine Chemical Technology, V. R. Prokofyev, L. Ye. Vinnitskiy, V. G. Epshteyn - Central Scientific Research Institute at the Ministry of Transport and Yaroslavl' Institute of Technology); the theory of swelling of rubber-cord construction in hydrocarbons, (I. I. Tugor - All-Union Scientific Research Institute of Film Materials and Synthetic Leather); the prospects of splitting and tissue removal of rubber, and waste products in the production of commercial rubber articles, (S. A. Vil'nits, V. Ye. Gul'). The conference adopted the following decisions: promoting of activity in synthesizing new polymers, such as СКИ-3 (SKI-3), butyl rubber, СКД (SKD), carboxylic methylvinylpyridine rubber; introduction of new ingredients, such as synthetic resins, anti-aging agents, anti-ozocants, and vulcanization accelerators; development of highly-dispersed and hydrophobinated

Card 3/4

S/138/62/000/012/010/010
A051/A126

IV Scientific research conference on...

fillers for siloxane rubbers; modernization of mixing and vulcanizing equipment; promoting of chemical knowledge through the main organizations of VKhO, im. D. I. Mendeleyev; improving quality of rubber articles. It was suggested that space in the "Kauchuk i rezina" be allotted to discussions on major scientific problems (rubber mix preparation, intensification of the vulcanizing process and quality improvement). Finally, it was decided to conduct a series of conferences at Yaroslavl', and the importance of All-Union conferences on Chemistry and Rubber Technology was emphasized.

Card 4/4

S/081/61/000/015/136/139
B102/B101

11.2320

AUTHORS: Epshteyn, V. G., Kholodkovskiy, B. N., Polyak, M. A., Bakharev, A. I.

TITLE: New accelerators, derivatives of triethanolamine

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 15, 1961, 603, abstract 15I1381 (Sb. "Vulkanizatsiya rezin. izdeliy". Yaroslavl', 1960, 66 - 68)

TEXT: The properties of sulfur rubbers of НК (NK) and butadiene-styrene with new accelerators are described. These accelerators are: "trica" - triethanolamine salt of Captax, "triethal" - disubstituted triethanolamine salt of phthalic acid, and "kiethal" - monosubstituted triethanolamine salt of phthalic acid. These accelerators increase the vulcanization rate, improve the resistance to scorching and aging, and also the physical and mechanical properties. They are most effective when applied to combinations with Altax, Captax, and thiuram. Test results of these rubbers and their kinetics of vulcanization are presented. [Abstracter's note: Complete translation.]

Card 1/1

ZAKHARKIN, O.A.; KOLDAYEVA, T.N.; LISOGURSKIY, Z.I.; SKOVORODKIN, P.A.; POLYAK, M.A.; YUR'YEVA, A.K.; Prinimali uchastiye: GAVSHINOV, I.I.; SAVINA, A.S.; ALEKSANDROV, Yu.A.; SEMENOVA, A.N.

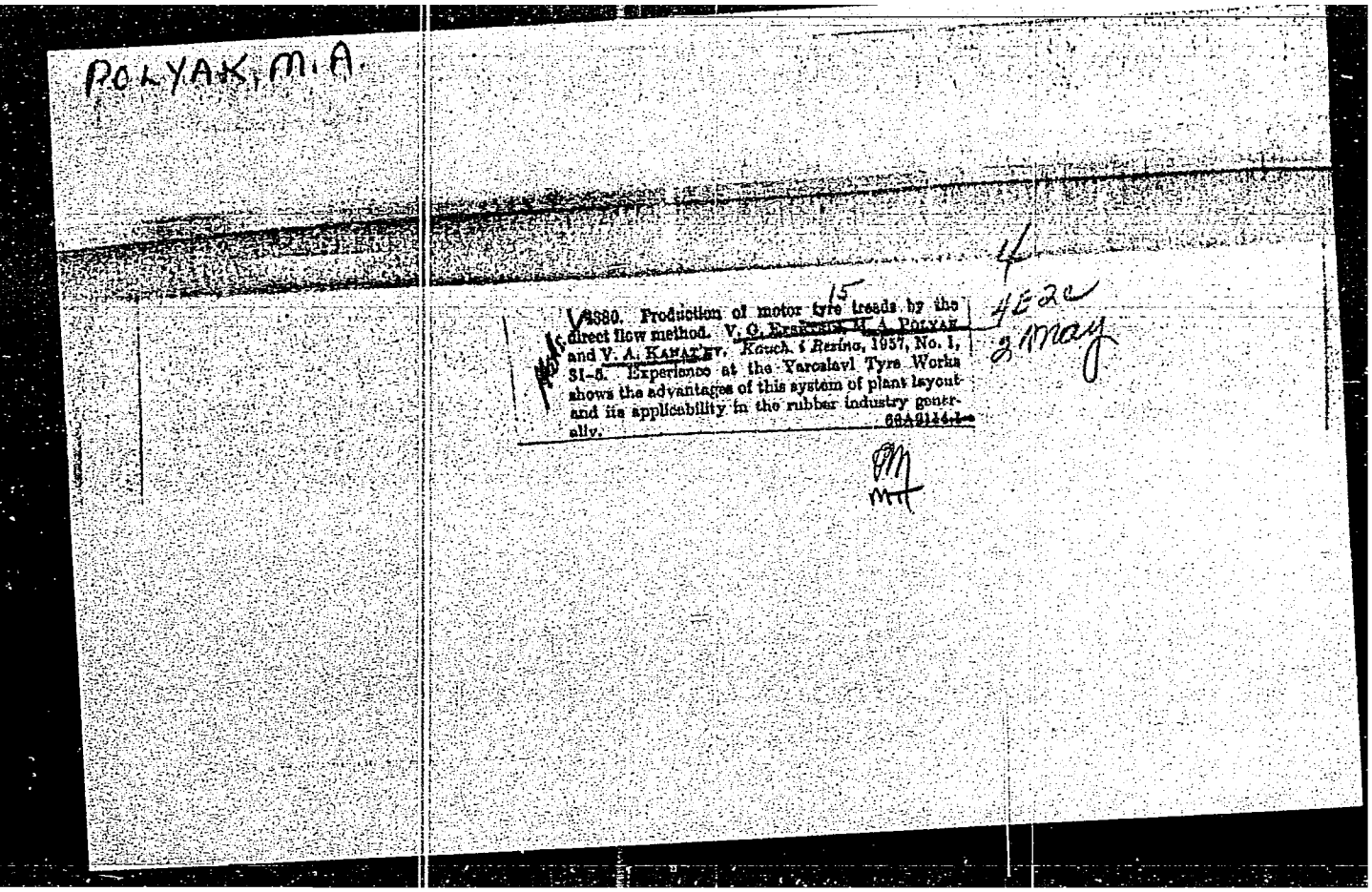
Some peculiarities in preparing rubber mixtures in a two-speed rubber mixer. Kauch. i rez. 20 no.10:39-41 O '61. (MIRA 14:12)

1. Yaroslavskiy shinnyy zavod.
(Rubber industry--Equipment and supplies)

POLYAK, M.A.; KUVALDINA, L.A.

Investigating the possibility of intensifying the vulcanizing of tire casings. Kauch. i rez. 17 no.3:23-26 Mr '58. (MIRA 11:6)

1.Yaroslavskiy shinnyy zavod.
(Tires, Rubber)
(Vulcanization)



POLYAK, M.A.

15

V 3380. Production of motor tyre treads by the direct flow method. V. G. ERSHOVICH, M. A. POLYAK and V. A. KAMAT'EV. *Kauch. i Rezina*, 1957, No. 1, 31–5. Experience at the Yaroslavl Tyre Works shows the advantages of this system of plant layout and its applicability in the rubber industry generally.

4E2a
3 May

POLYAK, M.A.; BIBIKOVA, A.A.; GUREVICH, M.I.

Studying the possibility of accelerating the vulcanization of automobile inner tubes. Kauch.i rez. 16 no.5:30-32 My '57. (MIRA 10:7)

1. Yaroslavskiy shinnyy zavod.
(Vulcanization) (Tires, Rubber)

POLYAK, M.A.

5

15

V ulcanization accelerators. A. I. Bakharev, M. A. Pol-yak, B. N. Kholodkovskii, and V. G. Epshtein. U.S.S.R. 101,269, Nov. 30, 1955. "Triethal," which is a neutral salt of triethanolamine and o-phthalic acid, is used as a vulcanization accelerator. M. Hosch

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POLYAK, M.A.

28951
S/129/61/000/010/007/009
A051/A129

11.2320

AUTHORS: Zakharkin, O.A., Koldyyeva, T.N., Lisogurskiy, Z.I., Skovorodkin, P.A., Polyak, M.A., Yur'yeva, A.K.

TITLE: Some peculiarities of the preparation of rubber mixes in a two-speed rubber mixer

PERIODICAL: Kauchuk i rezina, no. 10, 1961, 39 - 41

TEXT: Experiments were conducted on the new two-speed rubber mixer DRS-140 (DRS-140) manufactured at the Kiyevskiy mashinostroitel'nyy zavod (Kiyev Machine-Building Plant) "Bol'shevik", according to designs of the NIIKhimmash. Its rotors have 19.76/16.76 and 39.52/33.5 rpm; respectively. The capacity of the mixing chamber is 2.5 liters, the size of the space between the blades of the rotors and the walls of the mixing chamber 6-7 mm. Results of the experiments showed that when preparing casing-breaker mixes in the rubber mixer at 40 rpm a mixing duration of 1.5 min without taking into account the loading and unloading, and a specific pressure of the upper press of 3.7 kg/cm^2, the volume of the load may be brought to 165 liters without impairing the quality of the mix. The loading coefficient of the chamber of the DRS-140 rubber mixer is 65%. Thus

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28951
S/138/61/000/010/007/009
A051/A129

Some peculiarities of the preparation ...

the effect of the loading volume was checked and the optimum value (165 l) confirmed for the casing and breaker mixes based on 100% NK and combinations of it with CKB (SKB), also for tread mixes based on 100% butadiene-styrene rubbers. The 1.5 min duration time is recommended for the casing-and breaker mixes in one stage at 40 rpm of the rotor with an introduction of sulfur in the 84-inch rollers. Conditions for preparing tread mixes based on 100% butadiene-styrene rubbers in two cycles are recommended. The possibility of using the PC-2 (RS-2) rubber mixers available at the plant is pointed out in order to accomplish the second cycle of mixing of the tread mixes as well as introduction of sulfur and accelerators. The following persons took part in the work: J.J. Gavshinov, A.S. Savina, Yu.A. Aleksandrov, A.N. Semenova. There are 4 tables and 10 Soviet-bloc references.

ASSOCIATION: Yaroslavskiy shinnyy zavod (Yaroslavl' Tire Plant).

Card 2/2

ACCESSION NR: AT4029918 S/3087/62/001/000/0155/0158

AUTHOR: Polyak, M. A.; Epshteyn, V. G.; Lazareva, L. A.

TITLE: The effect of some resins on the gas permeability of rubber

SOURCE: Yaroslavl'. Tekhnologicheskiy institut. Khimiya i khimicheskaya tekhnologiya, vol. 1, 1962, 155-158

TOPIC TAGS: gas permeability, resin, rubber, natural rubber, butadiene, styrene, caoutchouc, BSS-85 resin, indene-coumarone resin, Yarrezina-B resin, SKS-30 synthetic caoutchouc

ABSTRACT: The authors studied the nitrogen permeability of rubber determined on an instrument constructed by the Yaroslavskiy shinnyy zavod (Yaroslavl tire works); the effect of different quantities of ingredients on the nitrogen permeability of the various types of rubber are presented in graphs. The effect of BSS-85, indene-coumarone and Yarrezina-B resins was tested on the gas permeability of rubber based on natural and synthetic (SKS-30) caoutchouc. It was found that indene-coumarone most effectively lowers the gas permeability of rubber based on natural caoutchouc and the butadiene styrene resin BSS-85 was the most effective for rubber based on SKS-30 caoutchouc. The use of BSS-85 was recommended in the makeup of innertube

Card 1/2

ACCESSION NR: AP4029918

mixtures based on SKB-30 and indene-coumarone resins in rubber -- for the air tight layer based on natural caoutchouc. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 29Apr64 ENCL: 00

SUB CODE: CH NO REF SOV: 004 OTHER: 002

Card 2/2

POLYAK, M.A.

"General principles of rubber technology" by Kh.E.Malkina. Reviewed by M.A.Poliak. Kauch. i rez. 20 no.12:59 D '61. (MIRA 15:1)
(Rubber) (Malkina, Kh.E.)

POLYAK, M.A.

"Fundamentals of the modern technology of automobile tires" by A.V. Saltykov. Reviewed by M.A. Poliak. Kauch. i rez. 20 no. 4:64 Ap '61. (MIRA 14:5)
(Automobiles—Tires) (Saltykov, A.V.)

GOLKOVA, V.Ya.; ZAKHAROV, N.D.; POLYAK, M.A.; ANDRASHNIKOV, B.I.; KUSOV, A.B.

"English-Russian dictionary on caoutchouk, rubber and synthetic fibers" by F.I. IAshunskaia, I.E. Feigin. Reviewed by V.IA. Golkova and others. Kauch. i rez. 23 no.1:57-58 Ja '64. (MIRA 17:2)

POLYAK, M.A.; EPSHTEYN, V.G.; LAZAREVA, L.A.

Effect of some resins on the gas permeability of rubbers. (MIRA 17:2)
Khim. i khim. tekh. 1:155-158 '62.

POLYAK, M.A.; EPSHTEYN, V.G.; GLAVINA, V.S.; BELAVINA, N.P.

Investigating the possibility of using the oxalate of triethanolamine as vulcanization accelerator. Khim. i khim. tekh. 1:133-138 '62. (MIRA 17:2)

LISOGURSKIY, I.Z.; SAKALOV, V.V.; DEMIDOV, G.K.; POLYAK, M.A.

Impregnation and rubberizing of cord at the Yaroslavl Tire Factory. Kauch. i rez. 20 no.11:55-57 N '61. (MIRA 15:1)

1. Yaroslavskiy shinnyy zavod.
(Yaroslavl—Tire fabrics)

YASHUNSKAYA, F.I.; NAZAROVA, M.V.; EPSHTEYN, V.G.; POLYAK, M.A.

In the D.I.Mendeleev All-Union Chemical Society. Kauch. i rez. (MIRA 18:2)
23 no.12:50-52 D '64.

ACCESSION NR: AT4029925 S/3087/62/001/000/0133/0138

AUTHOR: Polyak, M.A.; Epshteyn, V.G.; Glavina, V.S.; Belavina, N.P.

TITLE: The study of the possibility of using tri-ethanolamine oxalate as a vulcanization accelerator

SOURCE: Yaroslavl'. Tekhnologicheskiy institut. Khimiya i khimicheskaya tekhnologiya, vol.1, 1962, 133-138, 4~ 8

TOPIC TAGS: triethanolamine oxalate, vulcanization, vulcanization accelerator, nairit, neoprene

ABSTRACT: The authors sought a new type of accelerator based on inexpensive, widely available raw material having a great induction period of action and which is suitable for vulcanization of different types of caoutchouc, including Nairit (neoprene). They studied the effect of tri-ethanolamine oxalate on a vulcanization of rubber mixtures based on natural and polychloroprene caoutchouc. It was shown that tri-ethanolamine oxalate accelerates the vulcanization of natural caoutchouc, assuring an increase in the modulus index of 300% and a pressure resistance of a rubber comparable to the accelerator mercaptobenzothiazole. The advantages of tri-ethanolamine oxalate were especially evident at an increased (161°C) vulcanization tem-

Card 1/2

ACCESSION NR: AT4029925

perature. The kinetic curve of the sulfur bonding in the presence of tri-ethanolamine oxalate has, approximately, an s-shape character; i.e., in the initial stage of vulcanization sulfur addition is restrained. Tri-ethanolamine oxalate in a dose of 0.5 by weight in mixtures, based on Nairit, increased the resistance of the mixtures to subvulcanization, and with a content of 2.0 by weight, it accelerated vulcanization to which the dosage of the metal oxides can be lower. Tri-ethanolamine oxalate is recommended as an accelerator of vulcanization for tire carcases mixtures based on natural caoutchouc. Orig. art. has: 2 tables and 2 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 29Apr64 ENCL: 00

SUB CODE: CH NO REF SOV: 010 OTHER: 002

Card 2/2

S/081/62/000/005/107/112
B167/B101

AUTHOR: Polyak, M. A.

TITLE: A study of some activators of the oxidative destruction and some accelerators of the sulfur vulcanization of natural rubber

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 646, abstract 5P309 (Uch. zap. Yaroslavsk. tekhnol. in-ta, v. 6, 1961 165 - 170)

TEXT: In a search for a mastication activator for natural rubber (NR) which would not require a change in the prescription of tire mixtures, the following vulcanization accelerators were studied: mercaptobenzothiazole (I), dibenzothiazyldisulfide (II), diphenylguanidine, tetramethylthiuram disulfide, sulfenamide BT(BT), and triethal (the neutral ortho-phthalate of triethanolamine). The best mastication activator was I, added to NR in the proportion 0.2 % by weight per 100 % by weight NR; larger additions have little effect on the plasticity. The physicomechanical properties and the resistance to scorching of rubbers plasticized with I or with II are com-

Card 1/2

POLYAK, M.A.; GLIKMAN, L.Sh.; ZIMIN, I.A.; DEMIDOV, G.K.

Development and use of chafer fabrics with a new yarn structure in the manufacture of tires. Kauch. i rez. 22 no.10:50-52 O '63. (MIRA 16:11)

1. Yaroslavskiy tekhnologicheskiy institut i Yaroslavskiy shinnyy zavod.

Polyak, M.A.

EPSHTEYN, V.G.; POLYAK, M.A.; KANAT'YEV, B.A.

Manufacturing automobile hood protectors by the continuous method. (MLRA 10:4)
Kauch.i rez.no.1:31-35 Ja '57.
(Rubber industry)

L 46172-66 EWT(m)/EWP(j) IJP(c) DJ/RM (A)

ACC NR: AP6021204 SOURCE CODE: UR/0138/66/000/003/0016/0018

AUTHOR: Epshteyn, V. G.; Vasil'yev, G. Ya.; Serov, I. A.; Kurakin, K. A.; Lyapina, L. A.; Polyak, M. A. 37 B

ORG: Yaroslavl Technological Institute (Yaroslavskiy tekhnologicheskiy institut)

TITLE: New type of softener with an aromatic base

SOURCE: Kauchuk i rezina, no. 3, 1966, 16-18

TOPIC TAGS: rubber chemical, petroleum product, plasticizer

ABSTRACT: In order to broaden the source of raw materials for the rubber industry, an extract named "azaroplast" (Azerbaydzhan aromatic plasticizer), obtained from the furfural purification of lubricating oils of Baku crudes, was tested as a softener. Azaroplast was tested in comparison with other commonly used softeners in standard mixes based on NK natural rubber and butadiene-styrene SKS-30ARK rubber and in a tread mix consisting of 70% SKS-30ARK and 30% NK. The tests showed azaroplast to surpass the other softeners in plasticizing effect. The vulcanization rate of mixes containing azaroplast was practically the same as that of mixes with the other softeners. Vulcanizates of standard mixes based on NK and SKS-30ARK and containing azaroplast had increased strength characteristics. Replacement of mazut with azaroplast in tread mixes will permit a considerable increase in the extrusion rate and produce higher strength

UDC: 678.049.37.004.12

Card 1/2

L 46172-66

ACC NR: AP6021204 O

characteristics. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 11/ SUBM DATE: 07Oct64/ ORIG REF: 004/ OTH REF: 002

Card 2/2

ACC NR: AP7000911 (A) SOURCE CODE: UR/0138/66/000/012/0011/0013

AUTHOR: Kozdunovich, Yo. B.; Epshteyn, V. G.; Zakharov, N. D.; Polyak, M. A.; Orekhov, S. V.; Murashova, L. A.; Dokiyenko, A. K.

ORG: Yaroslavl Technological Institute (Yaroslavskiy tekhnologicheskiy institut)

TITLE: Use of an SKD rubber-Nairit combination in the manufacture of commercial rubber products

SOURCE: Kauchuk i rezina, no. 12, 1966, 11-13

TOPIC TAGS: butadiene rubber, chloroprene rubber, synthetic rubber

ABSTRACT: The possibility of using combinations of cis-1,4-butadiene rubber (SKD) with Nairit (chloroprene rubber) in the production of commercial rubber products was investigated by introducing SKD into Nairit-base mixtures for V-belts, compression layers of V-belts, and rubber mixtures to be used for injection molding. SKD was found to impart a satisfactory moldability, improve the calenderability, and markedly decrease the adhesiveness of the mixtures. Nairit vulcanizates combined with SKD have a high ozone resistance. SKD lowers the brittleness temperature of the vulcanizates, substantially decreases their residual compressive strain, and lowers the heat production. V-belts prepared by using SKD in the compression layer were found to have longer service lives than ordinary mass-produced V-belts. Orig. art. has: 2 tables.

SUB CODE: 11/ SUBM DATE: 10Jun66/ ORIG REF: 001/ OTH REF: 004

Card 1/1 UDC: 678.762.2+678.763.2):678.06:62.002.2

SZEGEDI, S.; TAMASI, J.; POLYAK-MESZES, Gabrielle

Comparative analysis of the underground and aboveground parts of grapevine stocks ir case of regular and deep planting. Acta agronom Hung 12 no.1/2:141-166 '63.

1. Station "Mathiasz Janos" de L'Institut des Recherches Viticoles, Kecskemet (Katonatelep), Institut des Recherches D'Horticulture, Budapest, Section Generale de L'Institut pour la Planification des Plantations.

KOLPAKOV, M.G.; POLYAK, M.G.; YAKOBSON, G.S.

Role of the adrenals in the restoration of vital functions following clinical death. Biul. eksp. biol. i med. 47 no.3:21-27 Mr '59. (MIRA 12:7)

1. Iz kafedry patologicheskoy fiziologii (zav. - dotsent G. L. Lyuban) Novosibirskogo meditsinskogo instituta (dir. - prof. G. S. Zalesskiy Predstavlena deystvitel'nym chlenom AMN SSSR V. N. Chernigovskim.

(RESUSCITATION,
eff. of adrenalectomy on restoration of vital funct. after clin. death in exsanguinated animals (Rus))

(ADRENALECTOMY, effects,
on restoration of vital funct. after clin. death in exsanguinated animals (Rus))

POLYAK, M.K.; SMIRNOVA, I.A.; FRANTOV, G.S.

Aeroelectric prospecting using the infinitely long cable method in the Kola Peninsula. Sov.geol. 8 no.2:91-99 F '65. (MIRA 18:12)

1. Soyuznyy zapadnyy geofizicheskiy trest.

22928
S/123/61/000/007/020/026
A004/A104

9.7100

AUTHOR: Polyak, M.N.

TITLE: Some problems connected with the designing of the operative ferrite storage device for digital integrating computers

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 7, 1961, 9, abstract 7D87 ("Tr. Leningr. elektrotekhn. in-ta svyazi", 1959 (1960), no. 7, (44), 93 - 100)

TEXT: The author describes the mockup of a magnetic memory matrix being controlled by magnetic matrix decoders, intended for operation in digital integrating computers. To eliminate difference noises from semi-selected cores the matrix is pierced by a system of reading leads whose number is equal to the number of matrix columns, while the reading lead in each matrix column and row penetrates only one core. Since the piercing direction is the same the output signal has the same polarity on any reading lead, and these leads can be connected by an "or" circuit at the input of the common reading amplifier. For the recording or regeneration in two matrices of two different codes without increasing the number of equipment it is suggested either to pierce each matrix by a common regeneration lead,

Card 1/2

Some problems ...

making it possible to preserve in this matrix "0" during the recording of "1" in the other matrix, or to double-excite the magnetic decoders. The double excitation of the magnetic decoders is attained by utilizing control pulses of different duration, but with this method the synchronization of the dating pulse becomes intricate. The author investigates the problem of decoder control with the aid of transistors. There are 7 figures and 2 references.

O. Bachin

[Abstracter's note: Complete translation]

Card 2/2

GOL'DENBERG, L.M., dots.; LIPCHIN, G.S., inzh.; OKUNEV, Yu.B., inzh.; POLYAK, M.N., inzh.; RAKHOVICH, L.M., inzh.; VEYTSMAN, G.I., red.; ROMANOVA, S.F., tekhn. red.

[Digital differential analyzer]TSifrovoi differentsial'nyi analizator; informatsionnyi sbornik. Moskva, Sviaz'izdat, 1962. 109 p. (MIRA 16:3)

1. Sotrudniki Leningradskogo elektrotekhnicheskogo instituta svyazi imeni prof. M.A.Bonch-Bruyevicha (for Gol'denberg, Lipchin, Okunev, Polyak, Rakhovich).
(Electronic differential analyzers)

27356
S/194/61/000/003/013/046
D201/D306

9,7140

AUTHOR: Polyak, M.N.

TITLE: A method of increasing the reliability of a ferrite matrix memory

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 3, 1961, 31, abstract 3 B222 (Tr. Nauchno-tekhn. konferentsii. Leningr. elektrotekhn. in-ta Svyazi, no. 2, L, 1960, 51-54)

TEXT: A method is proposed for increasing the signal-to-noise ratio of a 2-coordinate ferrite matrix memory, in which the numbers are distributed along one of the coordinates and the selection of every number is achieved by sequential discharge. The memory has as many read-out wires as there are stored numbers and the read-out wires of every number intersect with the storing wire. All storage wires are connected to the input of the amplifier of an "OR" diode circuit. During the read-out all diodes, except the diode of the chosen number, are off. Thus, at any instant, only the signals

Card 1/2

A method of increasing...

from the chosen core (C) are applied to the input of the counter amplifier and the signal-to-noise ratio of the matrix is equal to that of one core. The described counting method permits an increase in the number of cores in the matrix and makes the requirements of the performance of a single core less stringent. The experiment was carried out with a matrix of 1024 cores. Diodes Д2Ж (D2Zh) were used for coupling. 4 figures. 2 references. [Abstracter's note: Complete translation]

Card 2/2

L 05092-67 EWT(1)
ACC NR: AP6013305 SOURCE CODE: UR/0413/66/000/008/0098/0098

AUTHOR: Polyak, M. N.

ORG: none

TITLE: A magnetic cumulative pulse counter. Class 42, No. 180857 [announced by Leningrad Electrical Engineering Institute of Communications im. Professor M. A. Bonch-Bruyevich (Leningradskiy elektretekhnicheskiy institut svyazi)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 98

TOPIC TAGS: pulse counter, pulse accumulation, magnetic core

ABSTRACT: This Author Certificate presents a magnetic cumulative pulse counter. The counter consists of several stages, each of which contains a delayed blocking generator and a protective diode in the coupling circuit between the stages. The design increases the operational reliability of the counter. A choke coil with a constant magnetization is connected to the winding of the coupling between the stages. One winding of the secondary core of each stage is connected to the collector circuit of each triode of the blocking generator. The other winding of the secondary core is connected to the diode of the coupling circuit.

SUB CODE: 09/ SUBM DATE: 24Mar65

Card 1/1 UDC: 681.142.07

ACC NR: AP7001827 SOURCE CODE: UR/0119/66/000/012/0019/0021

AUTHOR: Bykovskiy, I. D. (Engineer); Polyak, M. N. (Engineer)

ORG: none

TITLE: Accumulator-type counter using ferrite cores

SOURCE: Priborostroyeniye, no. 12, 1966, 19-21

TOPIC TAGS: pulse counter, pulse accumulation

ABSTRACT: The design of a multilevel flux counter is presented. One stage of this counter is shown in Fig. 1. The principle of operation is as follows: the input core is periodically switched by the input pulses. This in turn switches a fixed quantity of flux in core C_1 so that it is completely switched from negative to positive saturation only after the application of the n-th pulse. The C_1 core is then reset for the next cycle by a biased blocking oscillator circuit. The authors derive formulas for permissible deviation of critical parameters including the average incremental flux change $\Delta\Phi_1$ in core C_1. A special test circuit is presented which selects cores C_1 according to parameter $\Delta\Phi$. A two-stage pulse counter based on this principle was built and tested. The value of n for each stage was 4. The counter utilized

Card 1/3 UDC: 621.374.32

ACC NR: AP7001827

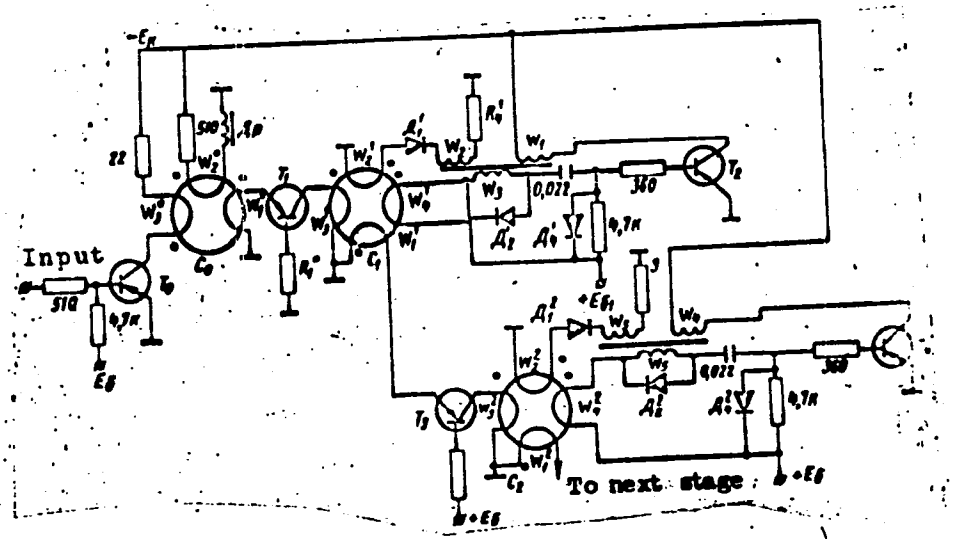

Fig. 1. Multilevel flux counter stage.

Card 2/3

ACC NR: AP7001827

VT-5 cores (OD, 7 mm; ID, 5mm; H, 2mm) and P-16 transistors. The repetition frequency of the input pulses was 10 kc. The counter operated successfully when the supply voltage was varied by no more than 20%. Orig. art. has: 8 formulas and 2 figures. [BD]

SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 002/ ATD PRESS: 5110

Card 3/3

ZYSINA-MOLOZHEN, L.M.; POLYAK, M.P.; ATENKOV, S., tekhn. red.

[Calculating the temperature field in a cooled turbine blade; Conference on Heat and Mass Transfer, Minsk, January 23-27, 1961] Raschet polia temperatur v okhlazhdaemoi turbinnoi lopatke; soveshchanie po teplo-i massoobmenu, g. Minsk, 23-27 ianvaria 1961 g. Minsk, 1961. 9 p. (MIRA 15:2)
(Thermodynamics) (Gas turbines—Blades)

38997
S/096/62/000/007/002/002
E194/E455

AUTHORS: Zysina-Molozhen, L.M., Doctor of Technical Sciences, Polyak, M.P., Engineer, Uskov, I.B., Engineer

TITLE: Heat transfer in turbine blading

PERIODICAL: Teploenergetika, no.7, 1962, 77-80

TEXT: The nature of gas flow between gas turbine blades is such that the heat-transfer coefficient can assume very different values at different places and this can give rise to unexpected temperature gradients in the blades. Only approximate methods of calculation are available for assessing this effect in cooled blades. Local values of the heat-transfer coefficient were calculated for root, middle and tip sections of a twisted blade, and considerable variations were found both across and along the blades. The temperature distribution in the blades was then calculated by two methods, one employing an average heat-transfer coefficient and the other dividing the blade up into four sections, each with its own value of heat-transfer coefficient. The differences between the results obteined by the two methods were particularly great at high rates of cooling; thus at a rate of

Card 1/3

S/096/62/000/007/002/002
E194/E455

Heat transfer in turbine blading

40 kcal/hour the difference near the blade root is 20°C; at 200 kcal/hour it is 95°C. A still greater difference would be found if the blade were divided into smaller sections. The calculation confirms that blade root cooling influences the blade temperature distribution only in the bottom quarter of the blade. The influence of cooling is important at heat transfer rates above 100 kcal/hour; here the calculation based on average heat-transfer coefficient is inaccurate and overestimates the benefits of cooling. In calculating heat transfer from the blade ends the usual boundary layer methods are not strictly valid because of interaction between the boundary layers of the blade end and those of the adjacent stationary wall. However, analysis shows that this interaction has little effect on heat transfer unless the blade pitch and boundary layer thickness are commensurate which, in practice, can occur only in rather special cases. To check the calculations tests were made in a flow of air at 200°C with stationary flat rows of blades water-cooled near the roots. Temperature and velocity distributions were measured and agreement with theory was good; in particular, the effect of interaction

Card 2/3

ZYSINA-MOLOZHEN, L. M.; POLYAK, M. P.; PETUKHOV, L. S.

"Temperature-field calculation in a gas-turbine blade with internal cooling."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Polzunov Boiler & Turbine Inst.

ZYSINA-MOLOZHEN, L.M., doktor tekhn.nauk; POLYAK, M.P., inzh.

Programming of the calculation of temperature field distribution in tail cooled turbine blades. Energomashinostroenie 9 no.8: 43-44, 48 Ag '63. (MIRA 16:8)
(Gas turbines--Cooling)

POLYAK, M.P.

Heating of a thin liquid stream carried down by a steam flow. Inzh.-fiz. zhur. 4 no.6:119-121 Je '61. (MIRA 14:7)

1. TSentral'nyy kotloturbinnyy institut imeni I.I.Polzunova, Leningrad.

(Thermodynamics) (Fluid dynamics)

POLYAK, M. P., and ZYSINA-MOLOZHEN, L. M

"The Calculation of Temperature Field in a Body of a Cooled Turbine Blade."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, BSSR, June 1961.

S-9

POLYAK, M.S. (Donetsk, [illegible])

Pneumoperitoneum and [illegible] roentgenography in the diagnosis of tumors of the internal female sex organs. Vop. onk. 10 no.12:77-81 '64. (MIRA 18:6)

1. Iz kafedry rentgenologii (zav. - dotsent [illegible]) i kafedry akusherstva i ginekologii No.1 (nauchnyy rukovoditel' - prof. P.P. Sidorov) Donetskogo meditsinskogo instituta (rektor - prof. A.M. Ganichkin) na baze Donetskoy oblastnoy klinicheskoy bol'nitsy imeni Kalinina ([illegible] P.A. [illegible]).

S/123/61/000/010/001/016
A004/A004

AUTHOR: Polyak, M. S.

TITLE: The search of new high-speed facing alloys of high strength and establishment of an expedient building-up technology

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 10, 1961, 13, abstract 10A104 (Dokl. Nauchno-proizv. konferentsii mashinostroiteley i priborostroiteley. Leningrad, Sudpromgiz, 1959, 44-51)

TEXT: New high-speed steels without W have been developed for the electric arc build up of tools containing B, N and Nb which increase the tool cutting properties. The increased V-content considerably raises the toughness and red hardness, and ensures higher cutting properties. The V-to-C ratio has to be strictly adhered to (1% V - 0.17% C). CO is included in the solid solution and increases the red hardness of the steel. The most expedient building-up method has been developed which ensures a tightly built up metal without pores or cavities.

V. Kolesnik

[Abstractor's note: Complete translation]

Card 1/1

POLYAK, M.S.

Erythromycin in the treatment of acute inflammatory diseases of the biliary tract. Antibiotiki 9 no.8:760-764 Ag '64. (MIRA 18:3)

1. Leningradskiy institut antibiotikov.

POLYAK, M. S., CAND TECH SCI, "SEARCH FOR NEW HIGH-SPEED filler WELD ALLOYS OF INCREASED RESISTANCE." STALINO, 1961. (MIN OF HIGHER AND SEC SPEC ED UKSSR, DONETS ORDER OF LABOR RED BANNER POLYTECH INST). (KL, 3-61, 219).

POLYAK, M.S., kand.tekhn.nauk

Increasing the wear resistance of the rollers of caterpillar chains. (MIRA 16:3)
Trakt. i sel'khozmash. 32 no.12:38 D '62.
(Crawler tractors)

POLYAK, M.S., kand.tekhn.nauk

Argon-arc hard facing of beet-harvesting combine disks. Svar. proizv. no.1:22-23 Ja '63. (MIRA 16:2)

1. Khar'kovskiy gornyy institut.
(Hard facing)

L 12998-63 EWP(k)/EWP(q)/EWT(m)/BDS AFFTC/ASD Pf-4 JD/HM
ACCESSION NR: AP3002193 S/0193/63/000/005/0003/0005

62

AUTHOR: Polyak, M. S.

TITLE: New alloys for making machine parts more abrasion-resistant

SOURCE: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 5, 1963, 3-5

TOPIC TAGS: abrasion resistance, alloys, arc welding, machine parts, argon, tungsten, vanadium, chromium, cobalt, carbides

ABSTRACT: Machine parts such as discs of beet sugar combines (SKN-2) made of 65G steel are not very abrasion-resistant and time out for sharpening reduces operating efficiency. At the request of the Ukrainian Scientific-Research Institute of Agricultural Machine Building, welding specialists of the Kharkov Mining Institute experimented on building up discs with a new highly resistant alloy (made of complex carbides of W, V, and Cr and cemented with Co). The discs being 400 mm in diameter and only 2 mm in cross section presented a problem since they could easily warp or burn through. Argon arc welding solved the problem. The discs were built up on a UDAR-300 unit with an infusible tungsten electrode and welding rods made of sormite and silver steel with tiny

Card 1/2

L 12998-63
ACCESSION NR: AP3002493

pellets (2 to 2 mm) of the new alloy sealed into them. Argon arc welding is two and a half times faster than electric arc welding with less fusion and greater hardness of the welded metal. It gives metal a thin dendrite structure. Under actual working conditions the welded discs proved to be 10 to 12 times more resistant than the standard discs. New alloys have also been developed to improve the operating efficiency of excavator bucket teeth and cable layer knives. Orig. art. has: no figures, formulas, or tables.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 12Jul63 ENCL: 00

SUB CODE: ML NO REF SOV: 002 OTHER: 000

Card 2/2

POLYAK, M.S.

Microflora of the bile in inflammatory diseases of the biliary tract. Zhur. mikrobiol., epid. i immun. 42 no.11:115-119 N '65. (MIRA 18:12)

1. Leningradskiy nauchno-issledovatel'skiy institut antibiotikov. Submitted August 3, 1964.

L 2765-66 EWT(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c) JD

ACCESSION NR: AP5021603 UR/0286/65/000/013/0072/0072
621.791.92
669.018.25

AUTHOR: Polyak, M. S.

TITLE: Iron-base alloy. Class 40, No. 172498

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 72

TOPIC TAGS: iron alloy, wear resistant alloy

ABSTRACT: An Author Certificate has been issued for an iron-base, wear-resistant alloy for hard facing parts working under abrasive conditions. The alloy contains (%) 2.7—3.0C, 5.0—6.5 W, 3.5—4.5 V, 6.0—7.5 Cr, 0.4—0.6 B, 0.25—0.35 N, 0.5—0.8 niobite, and the remainder is Fe. [MS]

ASSOCIATION: Poltavskiy inzhenerno-stroitel'nyy institut (Poltava Construction Engineering Institute)

SUBMITTED: 13Nov63 ENCL: 00 SUB CODE: MM

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4103

Card 1/1 PC

POLYAK, M.S.

New high-strength, ceramic-metal, hard alloy for boring machinery. Gor. zhur. no.6:74-75 Je '63. (MIRA 16:7)

1. Khar'kovskiy gornyy institut.
(Boring machinery--Equipment and supplies) (Ceramic metals)

POLYAK, M.S., kand.tekhn.nauk

New alloys for increasing the strength of machine parts subjected to abrasive wear. Biul.tekh.-ekon.inform. Gos.nauch.-issl.inst. nauch. i tekh.inform. 16 no.5:3-5'63. (MIRA 16:7)
(Alloys) (Mechanical wear)

POLYAK, M.S.

Content of monomycin in bile and its effectiveness in inflammatory diseases and surgery of the bile ducts. Antibiotiki 8 no.1:83-87 Ja'63. (MIRA 16:6)

1. Leningradskiy institut antibiotikov.
(MONOMYCIN) (BILE)
(BILE DUCTS—DISEASES)

POLYAK, M.S., kand. tekhn. nauk

Hard facing of steel drill bits with new alloys. Svar. proizv. no.8:34-35 Ag '63. (MIRA 17:1)

1. Khar'kovskiy gornyy institut.

POLYAK, M.S., kand. tekhn. nauk; BAGMET, V.S., inzh.

New electrodes for the hard facing of worn-out parts. Stroi. i dor. mash. 8 no.11:35 N '63. (MIRA 17:1)

POLYAK, M.S. (Leningrad, Zagorodnyy prospekt, d.17, kv.33)

Rational use of antibiotics in the treatment of inflammatory diseases of the bile ducts. Vest. Khir. 91 no.10:35-39 O '63. (MIRA 17:7)

1. Iz Leningradskogo instituta antibiotikov (dir. - dotsent A.V. Loginov, rukovoditeli raboty - prof. P.G. Oganesyan, kand. med. nauk A.M. Margolin) i bol'nitsy No.1 (glavnyy vrach - M.V. Perel'man, starshiy khirurg - A.S. Maksimovich) Oktyabr'skogo rayona Leningrada.

POLYAK, M.S., kand.tekhn.nauk; BAGMET, V.S., inzh.

New building-up alloys for increasing the strength of excavator bucket teeth. Vest.mashinostr. 44 no.3:86 Mr '64. (MIRA 17:4

POLYAK, M.S.; SVESHNIKOV, I.A.

Increasing the durability of cable-tool drill bits by the method of hard facing with new wear-resistant KhGI alloys. Nauch. trudy KHGI 11:101-103 '62. (MIRA 16:11)

POLYAK, M.S.

Significance of lateroscopy and laterography in diagnosing some diseases of the internal organs. Vrach. delo no.5:97-100 My '62. (MIRA 15:6)

1. Kafedra meditsinskoy radiologii i rentgenologii (zav. - dotsent I.A. Kunin) Donetskogo meditsinskogo instituta i Oblastnaya klinicheskaya bol'nitsa imeni M.I. Kalinina.
(DIAGNOSIS, RADIOSCOPIC) (MEDICINE, INTERNAL)

POLYAK, M.S., kand.tekhn.nauk

New durable alloy for hard facing cable drill bits. Shakht. stroi. 6 no.7:13 Jl '62. (MIRA 15:7)

1. Khar'kovskiy gornyy institut.
(Boring machinery) (Hard facing) (Steel alloys--Testing)

POLYAK, M.S., kand.tekhn.nauk

Using the method of hard facing with new alloys to increase the durability of steel bits. Gor. zhur. no.9:75 S '62. (MIRA 15:9)

1. Khar'kovskiy gornyy institut.
(Boring machinery) (Hard facing)

POLYAK, M.S.

Electric building up of knurling dies. Stan. i instr. 27 no. 11:21 N '56. (MLRA 10:1)

(Dies (Metalworking)) (Electric welding)

POLYAK, M. S

1-4E2c

1

High-speed built-up alloys. 18 M. S. Polyak. Stanki i
Instr. 28, No. 1, 30-1(1957).—By the use of plain C steel
electrodes coated with ferrous alloys adjusted to provide
the desired compn. and a conventional protective coat-
ing, and an a.-c. 190-amp. elec. arc., a no. of bits contg.
C 1.5, W 7, Cr 4, Mn 2, and V 2.47-7.51% were prepd.
Raising V to 5.10% gave max. hardness of R_c 65; hardness
was R_c 32 at 7.35% V. Bits contg. C 1.7, V 7, Nb 1.0,
and Co 5% added to the above base metal worked 35-44%
better than forged 18% W high-speed tools. I. D. Gat.

Struct
Mach des

MT

SUBJECT: USSR/Welding. 135-1-9/14

AUTHOR: Polyak, M.S., Engineer.

TITLE: Atomic hydrogen - resurfacing of forging dies. (Atomno-vodorodnaya naplavka shtampov).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 1, p 26 (USSR)

ABSTRACT: The author's new technology of resurfacing worn bending, trimming, and punching dies:

The die body of low-carbon steel is coated by steel "Kh12 M" (Kh12M). The coating is accomplished on welding machine AB-40 (AV-40), with a power of 60-65A, and 80 - 100 V. Before the coating, the die is preheated to 250 - 300°C. Treatment after surfacing consists of: heating during 6-7 hrs to 650°; heating during 1.5 hours to 900°; holding one hour at 900°; transfering into an oven heated to 700° and holding at this temperature for 3 hours; air cooling. As a result of the heating the hardness of the die face is reduced to 18-20 R_C.

The sequence of resurfacing operations is: annealing of the worn die; working out the cracks, or cleaning worn and pitted

Card 1/2

TITLE: Atomic hydrogen - resurfacing of forging dies. (Atomno-vodorodnaya naplavka shtampov). 135-1-9/14

surfaces with a portable grinding wheel; pre-heating the die to 400 - 500°, and surfacing; cooling in an oven heated to 600 - 650°C, or in a special pit; annealing; forging; machining to size; heat-treating resurfaced dies (quenching, tempering); inspection.

In the case of a face of over 200x30 mm and thickness of a facing layer of over 10 mm, it is recommended to mold by graphite of copper plates the face to be surfaced.

The durability of resurfaced dies is not lower than of new dies. Resurfacing can be repeated for three and more times. Burning out of C, Cr, and Mo is insignificant, the hardness and the micro-structure of coating fully correspond to steel X12M.

The article contains one diagram and no references.

INSTITUTION: Not stated
PRESENTED BY:
SUBMITTED:
AVAILABLE: At the Library of Congress

Card 2/2

AUTHOR: POLYAK,M.S. 121-7-13/26

TITLE: The Built-Up Fuse Welding of Cutting Tools with High-Speed Cast Iron. (Naplavka rezhushchego instrumenta bystrorezhushchimi chugunami, Russian)

PERIODICAL: Stanki i Instrument, 1957, Vol 28, Nr 7, pp 30-31 (U.S.S.R.)

ABSTRACT: Alloys of the stellite type can be used for the production of welded-on tools instead of high speed steels, because of their better useful properties. By their red heat resistibility they considerably surpass SS-steels. They are characterized by great hardness, resistibility to wear, and considerable chemical resistibility. As forging is not possible, stellites can be used in form of measuring plates or built-up welding. While stellites are inferior to hard metals with respect to red heat- and wear resistibility, they are superior with respect to toughness. They are more brittle than SS-steels and less expensive than hard metal, but they are more expensive than SS-steel. As metal working tools stellites are hardly used at all because of their brittleness. The basic properties of stellites are determined by the ratio between the carbide component and its mixed crystal, the basis of the latter representing cobalt. In order to

Card 1/2

121-7-13/26

The Built-Up Fuse Welding of Cutting Tools with High-Speed Cast Iron.

replace hard metal by stellites, various new alloys, so-called high-speed cast irons have been produced with a carbon content of C = from 2,3 to 3,3% and the following constant chemical composition: Cr - 25%, W - 18%, Co - 30%, V - 10%, and Nb - 1,5%. Experimentally, the optimum carbon content was found to be 2,7%, that of vanadium was found to be 10%, and of cobalt 20%. In the course of parallel tests carried out with SS-steels and welded-on stellite tools the latter were found to surpass SS-steels with respect to resistibility by the six-fold. In conclusion, the author expresses the opinion that the expensive and brittle metal-ceramic hard metal alloys should be replaced by SS cast iron.

Association: Not given
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress

Card 2/2

AUTHOR: Polyak, M.S.

TITLE: High Speed Steel Deposited by Fusion. (Bystrorezhushchiye Naplavochnyye Splavy).

PERIODICAL: Stanki i Instrument, 1957, No. 1. pp 30-31. (U.S.S.R.).

4 graphs, 3 tables and 3 Soviet references.

ABSTRACT: Tests conducted by the "Severnyy Kommunar" Plant of the МСНИП in Vologda have shown the practicability of using a 0.2% carbon steel electrode with suitable coating for fusing on the edges of cutting tools. The carbon steel electrode coating consists of one layer containing graphite and alloying elements with the following typical composition: 5% graphite, 35% FeW, 22% FeCr, 16% FeV, 10% FeMo, 2% FeMn, 2% FeSi, 1% Al. The second slag-forming and gas-shielding flux coating consists of 3% chalk, 28% marble, 12% fused spar and 29% field spar. The deposited alloys with varying amounts of carbon (between 1.03% and 1.71%)

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and varying amounts of vanadium (between 2.47% and 7.53%) were tried together with 7% W, 4% Cr, and 2% Mo. An increase of 1% V should accompany an increase of 0.16% C. The best alloy contains 1.5% C and 5.2% V. A hardness of 45 Rockwell C still prevails at 700°C compared with 40 Rockwell C in the high-tungsten (R.18) high speed steel. Even better results are obtained by introducing Columbium and Cobalt. The best steel contains 1.7% C, 7% W, 4% Cr, 7% V, 2% Mo, 1% Cb, and 5% Co, and is claimed to raise cutting speeds by 40% in comparison with forged high speed steel.

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AVAILABLE: Library of Congress

Card 2/2

POLYAK, M.S., inzhener.

Atomic hydrogen hard facing of stamping dies. Svar. proizv. no.1:26 Ja. '57. (MLRA 10:2)

(Hard facing)

POLYAK, M.S.

Electric arc fusion of a punching tool. Stan. i instr. 25 no.9:34-35 S '54. (MLRA 7:11)
(Punches)

Polyak, M.S.

USSR/Miscellaneous - Welding

Card 1/1 : Pub. 103 - 19/29

Authors : Polyak, M. S.

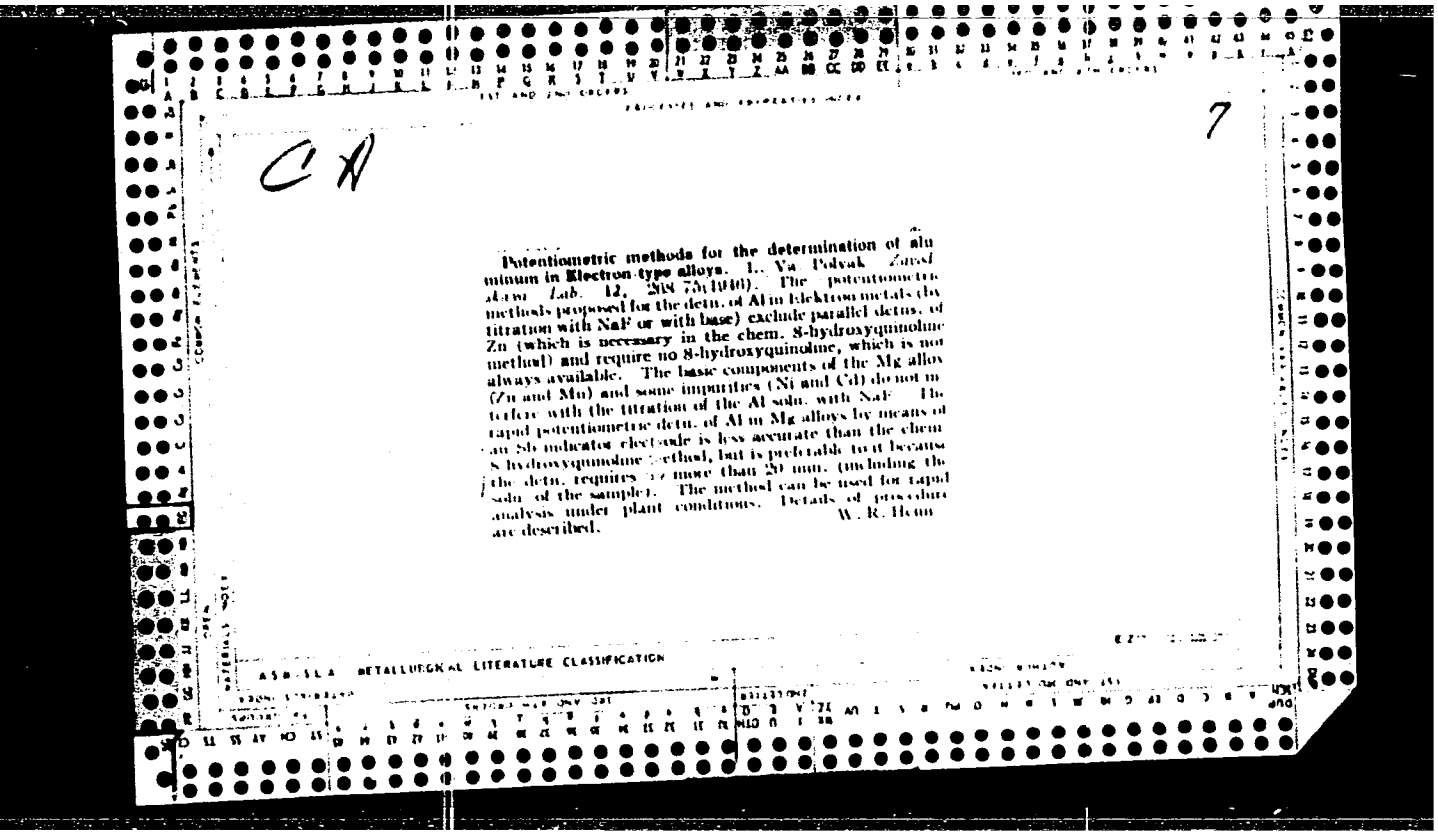
Title : Electrical arc-welding of a forging tool

Periodical : Stan. i instr. 9, 34-35, Sep 1954

Abstract : The technical and economical advantages, of electrical arc-welding of forging tools, are discussed. According to a developed technology the dies are made of low-carbon steel and only their working parts are built up by special alloys. The composition of such alloys for hot forging is based on three alloying components, namely, Mn, Cr and Mo. Graphs; drawing.

Institution : ...

Submitted : ..



CA

7

Potentiometric methods for the determination of aluminum in Electron-type alloys. L. Va. Polyak *Zavod. Lab.* 12, 208-75(1940). The potentiometric methods proposed for the detn. of Al in Elektron metals (by titration with NaF or with base) exclude parallel detns. of Zn (which is necessary in the chem. 8-hydroxyquinoline method) and require no 8-hydroxyquinoline, which is not always available. The basic components of the Mg alloy (Zn and Mn) and some impurities (Ni and Cd) do not interfere with the titration of the Al soln. with NaF. The rapid potentiometric detn. of Al in Mg alloys by means of an Sb indicator electrode is less accurate than the chem. 8-hydroxyquinoline method, but is preferable to it because the detn. requires no more than 20 min. (including the soln. of the sample). The method can be used for rapid analysis under plant conditions. Details of procedure are described. W. R. Heun

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

POLYAK, M.S., kand.tekhn.nauk

High resistance alloys for boring tools. Biul.tekh.-ekon.inform.-Gos.nauch.-issl.inst.nauch. i tekh.inform. no.8:5-8 '62. (MIRA 15:7)
(Boring machinery)

POLYAK, M.S.

X-ray diagnosis of uterine myoma. Akush. i gin. 40 no.4:103-105 Jl-Ag '64. (MIRA 18:4)

1. Kafedra rentgenologii (zav. - dotsent I.A. Kunin) i kafedra akusherstva i ginekologii No.1 (zav. - prof. P.P.Sidorov) Donetskogo meditsinskogo instituta na baze Oblastnoy klinicheskoy bot'nitsy imeni M.I.Kalinina (glavnyy vrach V.F.Zubko).

POLYAK, M. S. Cand Tech Sci -- (diss) "~~Study of~~ Research for new fast-cutting welding alloys of increased strength, and ~~the determination~~ establishment of a rational technology for welding them." Tbilisi, 1957. 14 pp (Min of Higher Education USSR. Georgian Order of Labor Red Banner Polytechnic Inst im S. M. Kirov), 150 copies (KL, 3-58, 97)

SOV/137-58-7-15966D

Translation from: Referativnyy zhurnal Metallurgiya, 1958, Nr 7, p 289 (USSR)

AUTHOR: Polyak, M. S.

TITLE: A Search for New Highly Stable Hard-faced High-speed Alloys and the Establishment of a Rational Technique of Their Deposition (Izyskaniye novykh bystrorezhushchikh naplavochnykh splavov povyshennoy stoykosti i ustanovleniye ratsional'noy tekhnologii ikh naplavki)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to the Gruz. politekhn. in-t (Georgia Polytechnic Institute), Tbilisi, 1957

ASSOCIATION: Gruz. politekhn. in-t (Georgia Polytechnic Institute), Tbilisi

1. Alloys--Development

Card 1/1

POLYAK, M.S.; PROSHIN, G.A.

Electric arc fusing of a cutting tool. Stan. i instr. 24 no.6:21-23 Je '53. (MLRA 6:7)
(Metal cutting)